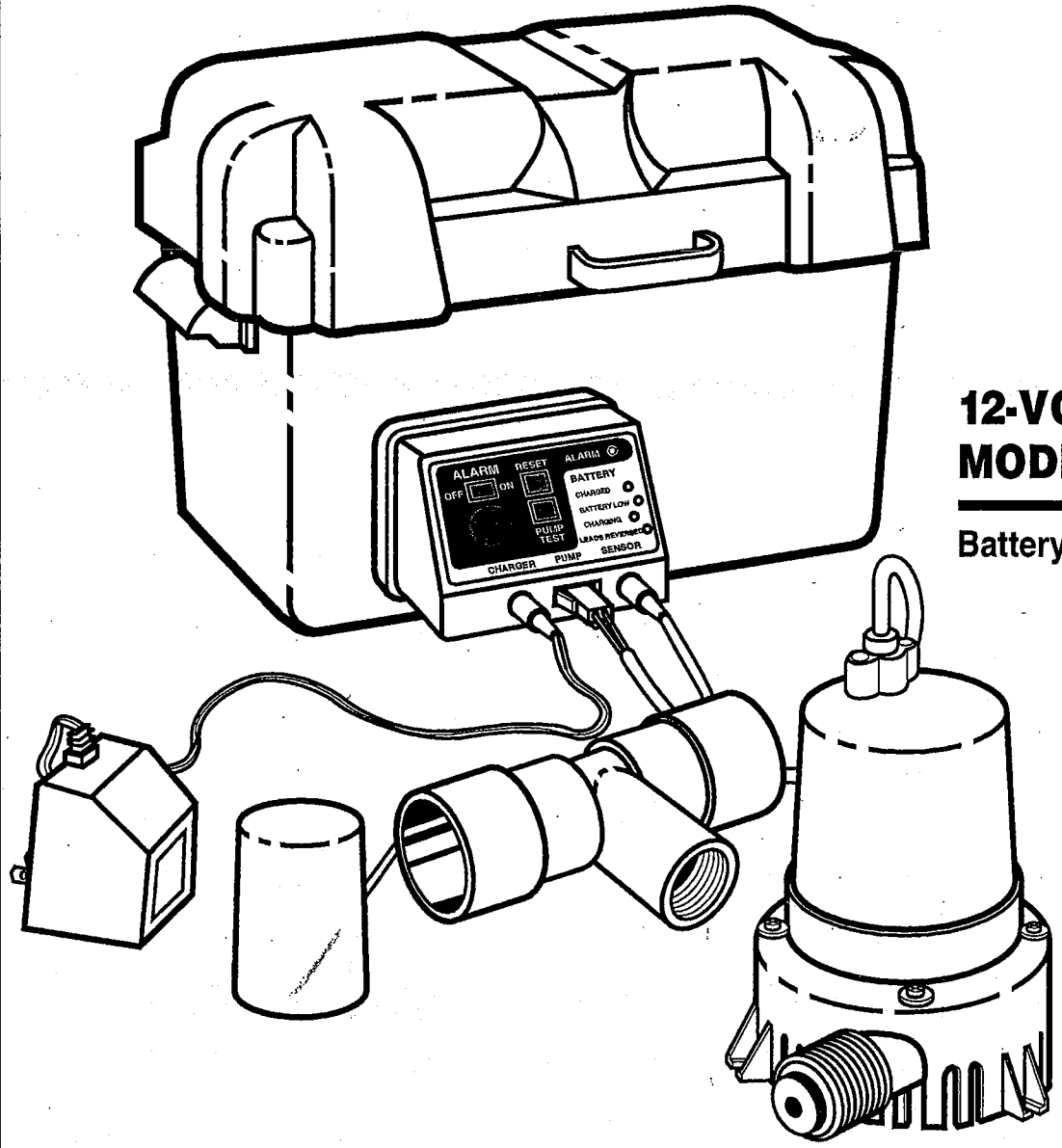
SHUR-DRI® DO IT YOURSELF

INSTALLATION MANUAL

12-VOLT EMERGENCY SUMP PUMP SYSTEM SD-BSP

CONSUMER HOT-LINE: 1-800-535-4950 • MONDAY - FRIDAY • 7 AM to 5 PM EASTERN STANDARD TIME
U.S.A. Only



12-VOLT SYSTEM MODEL SD-BSP

Battery not included

WARRANTY: PRODUCT DEFECTS COVERED 12 MONTHS FROM DATE OF PURCHASE OR 18 MONTHS FROM DATE OF MANUFACTURE. RECEIPT AND PRODUCT DATE CODE REQUIRED FOR WARRANTY CLAIM.

SHUR-DRI • ASHLAND, OHIO 44805-1969

25581A015

IMPORTANT SAFETY INSTRUCTIONS BEFORE INSTALLATION

Failure to follow these instructions may cause serious bodily injury and/or property damage.

1. READ THESE RULES AND INSTRUCTIONS CAREFULLY.

2. Before installing or servicing your pump: BE CERTAIN pump power source is disconnected.
3. Plumbing and electrical wiring must adhere to state and local codes. Check appropriate community agencies, or contact local electrical and pump professionals.
4. Keep the battery box in a cool, dry, well ventilated area away from sparks or flames. Battery exposure may result in an explosion or fire.
5. Beware of battery acid; it is very corrosive.
6. BATTERY SELECTION: Use a new, fully charged 12-volt battery with top terminals. We recommend a deep cycle (marine) battery (minimum 100 AH). Automotive batteries may be used with a slight decrease in performance and life. Group 24 batteries will fit into the battery box with maximum battery dimensions of 12"L x 6-1/2"W x 9"H (to the top of terminals).
7. BATTERY MAINTENANCE (every 3 months on batteries with removable top caps): Unplug battery charger. Measure the specific gravity of the electrolyte in each cell with a hydrometer. If the specific gravity falls below 1.225 in any one cell or varies more than .050 between all the cells, replace the battery. Check the electrolyte level and fill as required. Check battery terminals and clamps for tightness and corrosion; service as required. Plug battery charger back in.
8. Replace the battery if the back-up pump operates for an extended period and severely discharges the battery. We recommend battery replacement every 3 years regardless of system use.
9. When servicing the pump, use care:
- Disconnect power at main electrical service box by turning circuit breaker off or by removing the fuse.
- Disconnect battery charger from wall outlet.
- DO NOT lift pump by the power cord.

10. This system is intended for back-up use during power outage, not as a primary pump. **Do not run dry.**

11. SAVE THESE INSTRUCTIONS.

SYSTEM INSTALLATION

Be certain sump basin is clean and all power to pump is shut off. If pump fails to operate properly after installation, refer to troubleshooting checklist on page 4 or contact Shur-Dri. All parts with part numbers are quality Shur-Dri parts.

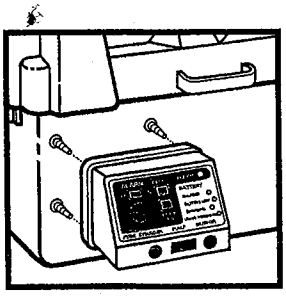
General Materials Needed
- One 12-volt emergency sump pump system SD-BSP. Includes 12-volt back-up pump, float switch, control panel, 12-volt charger, battery box, dual-size tee adapter, terminal clamps, wire ties, bolts, and screws. Does not include battery or primary sump pump.
- One can PVC cement (read directions carefully).
- One check valve SD-CV-170 (NOT INCLUDED).

Tools Needed for all pump installations
Crescent or socket wrench, Philips screwdriver, 24-tooth hacksaw, knife or round file.

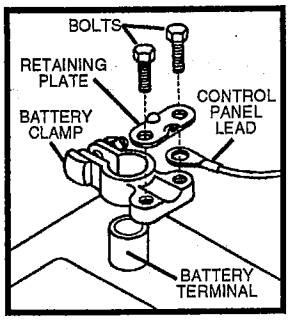
The nylon belt with buckle, two rigid nylon straps and four screws are not needed and can be discarded.

STEP 1 Remove cover from sump and disconnect the primary sump pump from the discharge pipe. Lift primary sump pump out of sump.

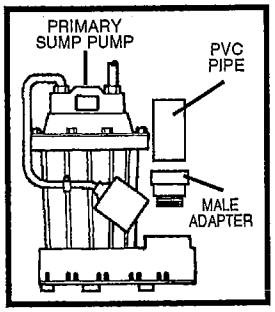
STEP 2 Attach control panel to battery box with four screws supplied. Place 12-volt battery (not included) into battery box.



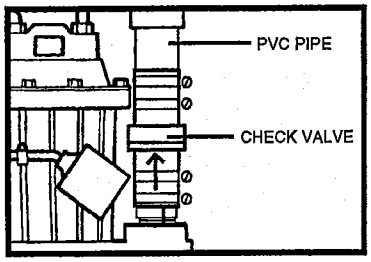
STEP 3 Tighten battery clamps onto battery terminals. With bolts and retainer plates supplied, attach RED control panel lead to POSITIVE (+) battery clamp. Attach BLACK control panel lead to NEGATIVE (-) battery clamp. The RED wire is supplied with an in-line fuse to protect the battery, pump and wiring should a short, over-current or ground fault occur. If the fuse must be replaced for any reason, it must be replaced with one of the exact same rating. Failure to do so may result in a fire hazard. If the leads are connected to the wrong terminals, the REVERSE control panel indicator will light. Reverse the leads. If battery voltage is less than 11 volts DC, the LOW control panel indicator will light. Recharge or replace battery.



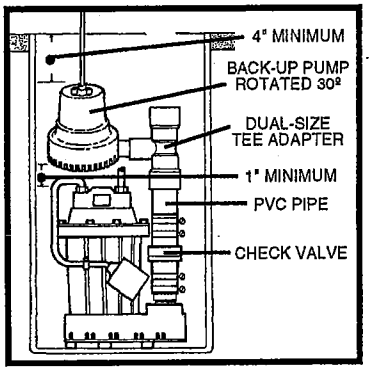
STEP 4 Thread male PVC adapter into primary pump discharge opening. Cement a 3"-4" piece of PVC pipe to adapter. Use appropriate diameter piping.



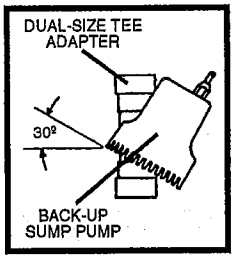
STEP 5 Clamp check valve SD-CV-170 to top of PVC pipe with water flow arrow pointing away from pump.



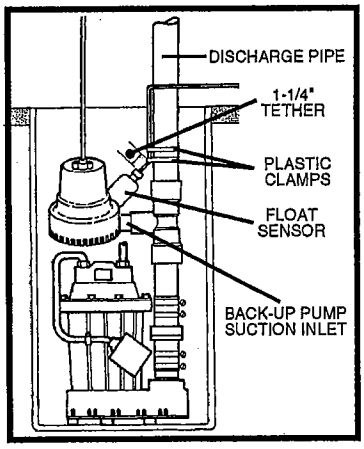
STEP 6 Clamp enough PVC pipe to check valve SD-CV-170 to place the bottom of the back-up sump pump a minimum of 1" above the top of the primary sump pump, and the top of the back-up sump pump a minimum of 4" below the top of the sump basin.



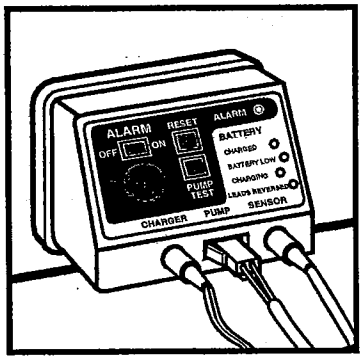
STEP 7 Thread dual-size tee adapter onto back-up sump pump. Tighten then rotate the back-up sump pump 30° to prevent airlocking.

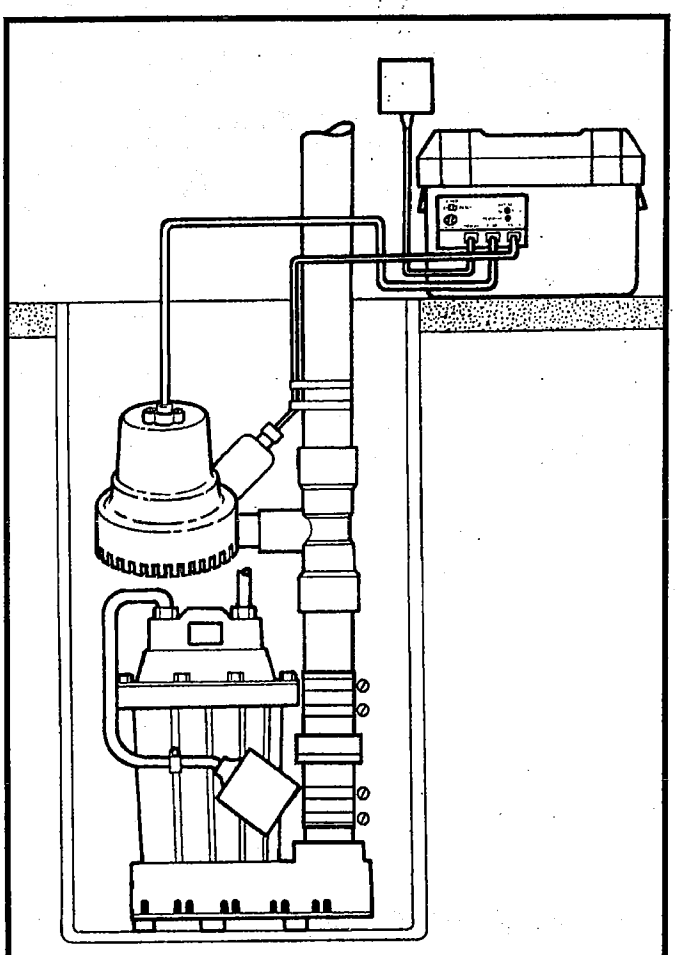


STEP 8 Cement enough PVC pipe to connect tee adapter to discharge. Tether float sensor to discharge pipe with plastic clamps provided. Tether 1-1/4". Float sensor should not hang lower than suction inlet of the back-up sump pump, and at least 2" below top of sump.



STEP 9 Plug AC charger, back-up sump pump, and float sensor into control panel slots labelled "CHARGER", "PUMP", and "SENSOR" respectively. Plug AC charger into an outlet. Complete installation should look like drawing to the far right.





COMPLETE BACK-UP SUMP PUMP INSTALLATION

OPERATION & TESTING

TESTING

After installation, unplug the primary sump pump and fill the sump with water. This is actually imitating the condition that would happen if the power went off or the primary pump failed for whatever reason. The back-up sump pump should begin operation as the water level rises just above it's top. If not, the float sensor may need to be re-positioned, review float installation instructions. Even after the back-up has pumped the excess water out and shut off, the alarm should continue sounding until the ALARM switch is set to the OFF position. The alarm continues to sound until the ALARM switch is set to OFF to alert you that something is wrong with the primary sump pump.

If the back-up pump operates properly, plug in the primary sump pump and set the ALARM switch ON and press the RESET button. The back-up system is now in full readiness.

If the back-up pump does not operate as specified, refer to the troubleshooting checklist.

OPERATION

When the FLOAT SWITCH turns the back-up pump ON, the alarm buzzer will sound. When the FLOAT switch turns the back-up OFF, the buzzer will continue to sound until the ALARM switch is pushed to the OFF position. Push the ALARM switch to the "ON" position. Press the RESET button for normal operation.

If the voltage of the battery drops lower than 11 volts DC, the LOW battery indicator will come on and the buzzer will sound if the ALARM switch is in the "ON" position. At this time, the battery should be checked and serviced or replaced. The only "real" test for a battery is when it is tested with a load meter. Take the battery back where it was purchased for the test.

The CHARGING indicator will come ON when the battery is UNDERCHARGED. The CHARGING indicator will turn OFF when the DC voltage is over 13 volts, then the CHARGED indicator will come ON. At this time the battery is at FULL-CHARGED condition and will stop charging. The CHARGED indicator will be ON until the DC voltage drops. The battery will start charging again and the CHARGING indicator will come ON. If either CHARGING indicator and CHARGED indicator are not ON, check the charger adapter for proper connection.

Near the end of the CHARGING cycle, the CHARGING and CHARGED indicators may alternately blink. IF the lights blink continuously, check the battery leads for proper polarity (Step 3) and replace the fuse.

Press PUMP TEST switch for pump function test: the pump comes ON and ALARM indicator comes ON and BUZZER sounds. Release the PUMP TEST switch, the pump turns OFF but the BUZZER continues to sound and ALARM indicator continues to be ON. Press the RESET switch, the BUZZER and ALARM indicator light will turn OFF.

Frequently Asked Questions on Battery Back-up Sump Pump Systems

Q. The red and yellow LED's flash on my control panel, what's wrong?

A. Maybe nothing at all! A slow flash rate, (about 1 second, or less), indicates that the charging system has nearly charged the battery to its optimum charge level. The flashing LED's should slow and eventually stop when the battery is completely charged.

A fast LED flash rate, (more than 2 per second), indicated the 1 A charging fuse has blown, the battery leads are reversed or the wall transformer is not supplying proper voltage to the control box. Check the battery connections, then replace the fuse. If the LED's continue to fast flash, check the 115V outlet for proper current and replace the plug-in wall transformer, if necessary. A severely discharged battery may also cause a surge in the system and blow the fuse if connected.

Q. When I hooked up the system, the yellow charging light came on. Why? The battery was supposed to be fully charged when I got it.

A. A new battery, although charged adequately to start most engines, will not be charged to its full/optimum level. The charging system supplied with your pump monitors the charge level and slowly charges the battery to its optimum level.

Q. O.K., after 2 days, the LED's are blinking between "charged and charging" what's wrong now?

A. Probably noting, see question 2 above. The system normally takes 2-3 days to fully charge a good battery from about 11.9 VDC to 14.4 VDC. As the battery approaches full charge, the LED's will alternate between "CHARGED" and "CHARGING."

Q. Finally, the LED's quit alternating and the "CHARGED" LED came on, but every once in a while the "CHARGING" LED comes on for just a second or two, then goes out. Is my system O.K.?

A. Yes! No need to worry, It is normal for a battery to lose some of its charge, (decay), when idle. Our charging system monitors the charge state and turns itself on to boost the battery backup to its optimum charge. This usually takes from a few seconds to a few minutes.

Q. We came home late one evening, and heard our battery back-up alarm sounding. The pump wasn't running. What's wrong?

A. It is possible that the primary pump failed to operate when needed and your back-up pump activated and drained the tank. The alarm activates any time the pump is called to operate. It continues to operate until the alarm condition is manually acknowledged by pressing the reset switch.

Q. Pressing the reset switch didn't silence the alarm, now what?

A. The alarm circuit is activated so long as the float switch is activated. Check to see if the back-up float switch is tangled or caught in the sump or piping. Remember to disconnect all power before servicing.

Q. The float wasn't tangled, but the alarm continues to pulsate.

A. A pulsating alarm is different from a steady tone. The pulsing alarm indicated that the battery voltage has dipped below an acceptable level. As a precaution, the charging circuit is locked out when this occurs, just in case one or more cells have shorted. It will be necessary to remove the battery and have it charged on a commercial automotive or marine battery charger, per the manufacturer's instructions. Once the battery voltage can be sustained above 11.9 VDC, the battery can be re-installed in the system and the on-board charging circuit can again be used to maintain the battery charge.

Q. When I got my system home and prepared to install it, I found out that the pump cable, sensor and charging cord were too short to reach the control box. Can I splice the leads so that they will reach?

A. Don't even think about it! The cable lengths were all designed around optimum operating parameters and are at a maximum length for their given sizes. Since the charger and pump are microprocessor, (computer) controlled, changing the cable lengths may affect critical computer inputs which could cause the system to malfunction and may even present a fire hazard.

Q. I couldn't install my battery back-up pump above my primary pump per your instructions, because my sump is too shallow. Will it matter if it is installed BESIDE my primary pump?

A. You bet. Installing a back-up pump in the sump beside the primary pump could spell disaster. Sediment will accumulate inside the back-up pump and may cause it to fail when needed most. The back-up pump must be installed above the normal turn on level of the primary pump. You may need to modify or replace your sump if it is too small. A minimum 30" deep sump is recommended. Remember, the back-up pump must also be tilted at a 30 degree angle to operate properly. (It may air bind if not tilted.)

Most often Asked Questions about Battery Back-up Sump Pumps

QUESTION	POSSIBLE CAUSES
Why is it necessary to install the pump at an angle?	Installing the pump at an angle prevents air from entering the system. If air were allowed to enter the system, the pump would not operate.
What is a trickle charger?	A trickle charger is a device that allows the battery to charge the pump system by constantly releasing tiny charges until the battery is fully charged.
Can a back-up sump pump be used with a pedestal sump pump?	Yes. However, your sump basin must be at least 18" in diameter, and a additional piece of PVC pipe must be used to extend the pump tee so the back-up pump will not interfere with the float rod of the pedestal pump.
The pump is buzzing but not pumping. What's wrong?	There are several reasons why this situation might occur: A) The system is air locked. Make sure the pump is positioned at the recommended 30 degree angle. B) Your battery is low. If the low-battery light is lit on the control box, make sure your battery is properly charged. C) The system may be clogged with debris. Make sure pipes are not plugged, and that the pump openings are clear.
What size fuse is required?	A 12 amp fuse for the RED (Positive) battery lead.
What type of battery should be used?	We recommend a deep cycle (marine) battery with 100 AH rating.

LIMITED WARRANTY

SHUR-DRI will repair or replace for the original user any portion of a new SHUR-DRI product which proves defective due to materials or workmanship of SHUR-DRI. Contact the nearest authorized SHUR-DRI dealer for warranty service. SHUR-DRI shall possess the sole right to determine whether to repair or replace defective equipment, parts or components. THIS WARRANTY DOES NOT COVER DAMAGE DUE TO LIGHTNING OR OTHER CONDITIONS BEYOND THE CONTROL OF SHUR-DRI.

PUMPS: Warranted 12 months from date of purchase or 18 months from date of manufacture. Receipt and product date code required for warranty claim.

LABOR & COSTS: SHUR-DRI shall IN NO EVENT be liable for the cost of field labor or other charges incurred by any customer in removing and/or reaffixing any SHUR-DRI product, part or component.

THIS WARRANTY WILL NOT APPLY: (a) to defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with printed instructions provided; (b) to failures resulting from abuse, accident, or negligence; (c) to normal maintenance services and the parts used in connection with such service; (d) to units which are not installed in accordance with applicable local codes, ordinances, and good trade practices; (e) if the unit is moved from its original installation location; (f) if unit is used for purposes other than for what it was designed and manufactured.

PRODUCT IMPROVEMENTS: SHUR-DRI reserves the right to change or improve its products or any component without obligation to provide such a change or improvement for units previously sold and/or shipped.

WARRANTY EXCLUSIONS: SHUR-DRI SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AFTER THE TERMINATION OF THE WARRANTY PERIOD SET FORTH HEREIN.

Some states do not permit some or all of the above warranty limitations and, therefore, such limitations may not apply to you. No warranties or representations at any time made by any representatives of SHUR-DRI shall vary or expand the provision hereof.

LIABILITY LIMITATION: IN NO EVENT SHALL SHUR-DRI BE LIABLE OR RESPONSIBLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES RESULTING FROM OR RELATED IN ANY MANNER TO ANY SHUR-DRI PRODUCT OR PARTS THEREOF. PERSONAL INJURY AND/OR PROPERTY DAMAGE MAY RESULT FROM IMPROPER INSTALLATION. SHUR-DRI DISCLAIMS ALL LIABILITY, INCLUDING LIABILITY UNDER THIS WARRANTY, FOR IMPROPER INSTALLATION – SHUR-DRI RECOMMENDS FOLLOWING THE INSTRUCTIONS IN THE INSTALLATION MANUAL. WHEN IN DOUBT, CONSULT A PROFESSIONAL.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

In the absence of suitable proof of this purchase date, the effective date of this warranty will be based upon the date of manufacture.

Direct all Notices, etc. to: Product Warranty and Return Dept., SHUR-DRI, 1101 Myers Parkway, Ashland, OH 44805-1969.

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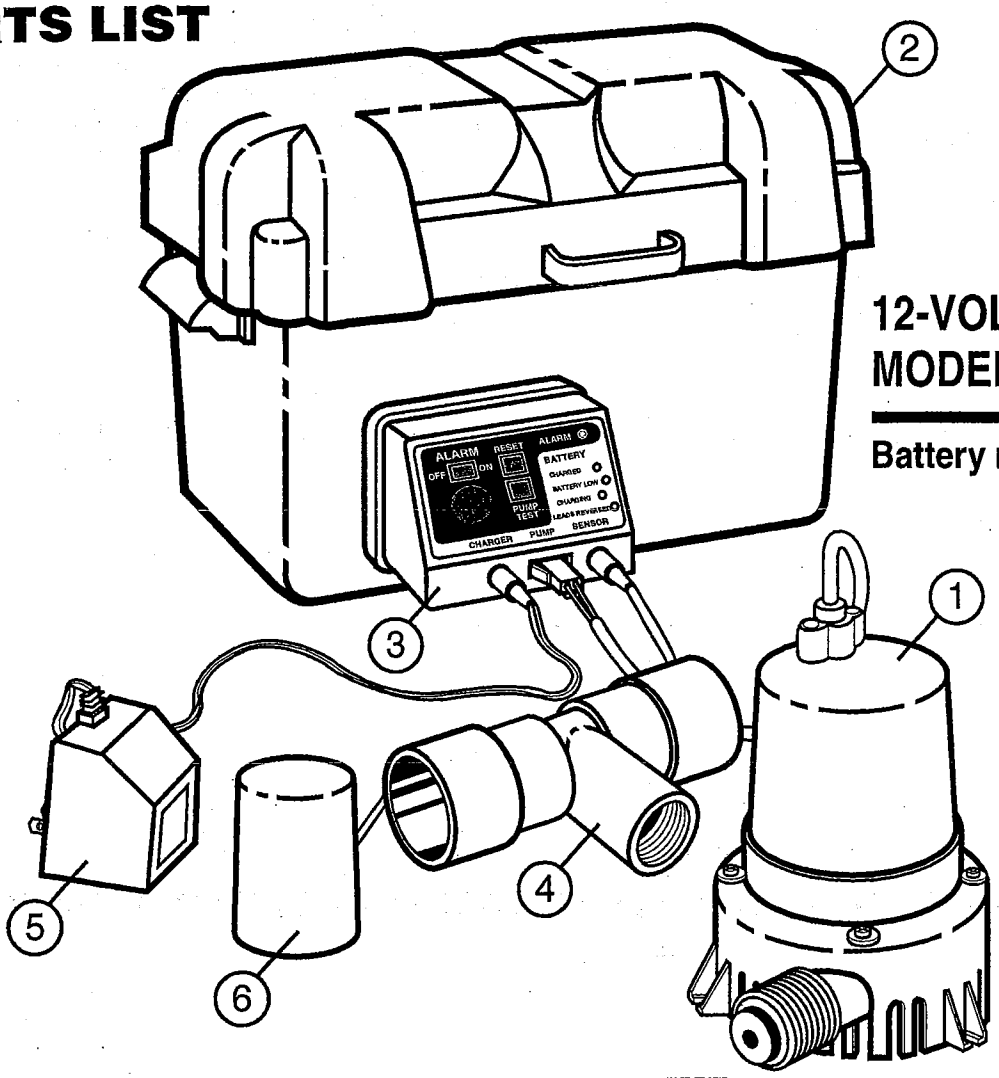
PARTS LIST



12-VOLT SYSTEM
MODEL SD-BSP

Battery not included

Ref. No.	Description	Qty. Req'd.	Part No.
1	Sump Pump	1	24963B505C
2	Battery Box	1	24963B504B
3	Panel Control	1	24963B507B
4	Tee Adapter	1	24963B503B
5	Battery Charger	1	24963B508B
6	Level Control	1	24963B506B
7	Tapping Screw (Not Shown)	4	08978A008
8	Cable Nylon Tie (Not Shown)	4	17190A012
9	Battery Clamp (Not Shown)	2	24963B509A

Les questions les plus demandées sur les pompes d'appoint de puisard a batterie

QUESTION	CAUSES PROBABLES
Pourquoi est-il nécessaire d'installer la pompe de biais ?	L'installation de biais de la pompe empêche l'air de s'infiltrer dans le système. Si cela se produisait, la pompe ne fonctionnerait pas.
Qu'est-ce qu'un chargeur à faible débit ?	Un chargeur à faible débit est un dispositif permettant à la batterie de charger le système de la pompe en libérant constamment d'infimes charges jusqu'à ce que la batterie soit rechargée à bloc.
Est-ce qu'une pompe à puisard d'appoint peut être utilisée avec une pompe à puisard à colonne ?	Oui. Toutefois, le bassin d'assèchement doit mesurer au moins 18po de diamètre et il faut utiliser un bout de tuyau en PVC supplémentaire pour prolonger le té de la pompe de façon que la pompe d'appoint ne nuise pas au fonctionnement de la tige à flotteur de la pompe à colonne.
La pompe fonctionne, mais elle bourdonne. Que se passe-t-il ?	Plusieurs causes peuvent être à l'origine du problème : A) Il y a un bouchon d'air dans le système. S'assurer que la pompe est positionnée à l'angle recommandé de 30°. B) La charge de la batterie est basse. Si le voyant de LOW de la batterie est allumé sur le panneau de commande, s'assurer que la batterie est correctement chargée. C) Le système peut être engorgé de débris. S'assurer que les tuyaux ne sont pas obstrués et que les ouvertures de la pompe sont dégagées.
Quel type de fusible utiliser ?	Un fusible de 12 A pour le fil ROUGHE de batterie (positif).
Quel type de batterie utiliser ?	Nous recommandons l'utilisation d'une batterie pour bateau à décharge profonde de 100 AH.

GARANTIE LIMITÉE

SHUR-DRI réparera ou remplacera pour l'utilisateur original toute partie d'un nouveau produit Shur-Dri qui s'avère défectueux en raison de matériaux ou de fabrication de SHUR-DRI Contacter le commerçant SHUR-DRI autorisé le plus proche pour un service sous garantie. SHUR-DRI a seul le droit de déterminer s'il faut réparer ou remplacer l'équipement, les pièces ou les composants défectueux. CETTE GARANTIE NE COUVRE PAS LES DOMMAGES DUS À LA FOUDRE OU À D'AUTRES CONDITIONS HORS DU CONTRÔLE DE SHUR-DRI.

POMPES : Garantie de 12 mois à partir de la date d'achat ou 18 mois à partir de la date de fabrication. Le talon d'achat et le code de date de produit sont nécessaires pour les réclamations sous garantie.

MAIN-D'OEUVRE ET COÛTS : SHUR-DRI NE sera EN AUCUN CAS responsable du coût de la main-d'oeuvre sur le terrain ou des autres frais encourus par un client en retirant ou en remettant en place un produit, une pièce ou un composant de produit SHUR-DRI pump.

CETTE GARANTIE NE S'APPLIQUE PAS : (a) aux défauts ou aux défaillances résultant d'une installation, d'une utilisation ou d'un entretien de l'appareil non conformes aux instructions imprimées fournies; (b) aux défaillances résultant d'un abus, d'un accident ou d'une négligence; (c) aux services d'entretien normaux et aux pièces utilisées en relation avec ces services; (d) aux unités qui ne sont pas installées conformément aux codes locaux, règlements et pratiques commerciales applicables; (e) si l'unité est déplacée de son emplacement d'installation original (f) si l'unité est utilisée pour autre chose que ce pour quoi elle a été conçue et fabriquée.

AMÉLIORATIONS DE PRODUIT : SHUR-DRI se réserve le droit de modifier ou d'améliorer ses produits ou leurs composants sans être obligé d'assurer une telle modification ou une telle amélioration aux unités vendues ou expédiées auparavant.

EXCLUSIONS À LA GARANTIE : APRÈS L'EXPIRATION DE LA GARANTIE DÉCRITE DANS LES PRÉSENTES, SHUR-DRI SE DÉSISTE SPÉCIFIQUEMENT DE TOUTE GARANTIE IMPLICITE DE COMMERCIALISATION OU DE CONVENANCE POUR UN USAGE QUELCONQUE.

Quelques Etats interdisent certaines ou l'ensemble des restrictions ci-dessus et il est donc possible que les restrictions ci-dessus ne s'appliquent pas à vous. Aucune garantie ou représentation faile à un moment quelconque par un représentant de la société SHUR-DRI ne saurait s'écarter ou élargir la clause ci-dessus.

RESTRICTION DE RESPONSABILITÉ : LA SOCIÉTÉ SHUR-DRI NE SAURAIT SOUS AUCUNE CIRCONSTANCE ÊTRE TENUE RESPONSABLE DE DOMMAGES INDIRECTS, SECONDAIRES OU SPÉCIAUX ATTRIBUABLES OU RELIÉS DE QUELLE QUE FAÇON QUE CE SOIT À UNE PIÈCE OU UN PRODUIT SHUR-DRI, DE MÊME QUE DE TOUTES LES BLESSURES ET/OU DOMMAGES MATÉRIELS ATTRIBUABLES À UNE MAUVAISE INSTALLATION. SHUR-DRI SE DÉSISTE DE TOUTE RESPONSABILITÉ, Y COMPRIS LES RESPONSABILITÉS LIÉES À CETTE GARANTIE, SI L'INSTALLATION N'EST PAS ADÉQUATE. SHUR-DRI RECOMMANDE DE SUIVRE LES INSTRUCTIONS APPARAISSANT DANS LE MANUEL D'INSTALLATION. EN CAS DE DOUTE, CONSULTER UN PROFESSIONNEL.

Certains Etats ne permettent pas l'exclusion ou la restriction des dommages indirects ou secondaires et il est donc possible que la restriction ci-dessus ne s'applique pas à vous.

Cette garantie vous accorde des droits juridiques précis. Vous pouvez avoir d'autres droits selon la législation en vigueur dans votre Etat.

En l'absence d'une preuve suffisante établissant la date d'achat, la date d'expiration de cette garantie sera basée sur la date de fabrication.

Envoyer tous les avis, etc... à : Product Warranty and Return Dept., SHUR-DRI, B.P. 9138, 269 Trillium Drive, Kitchener, Ontario N2G 4W5.

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